

## REMARKS

Claims 1-10, 13 and 15 have been canceled. Claims 22-29 have been withdrawn. Thus, claims 11, 12, 14 and 16-30 remain pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

Claims 11, 12, 14, 16-19, and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 3,054,321 to Macchia ("Macchia") in view of U.S. Publ. Appln. No. 2004/0143265 to Landry et al. ("Landry") and U.S. Patent No. 6,470,767 to Takachi ("Takachi").

Claim 11 has been amended to recites "[a] bone screw comprising a head having a first outer diameter, and *a cannulated shaft* extending distally from the head and having a longitudinal axis, the cannulated shaft further comprising a proximal section adjoining the head and having a second outer diameter smaller than the first outer diameter, an outer wall of the proximal section being at least partially threaded, and a distal section extending distally from the proximal section and being attached to the proximal section by way of a ball-and-socket joint, and wherein the ball-and-socket joint includes a ball in contact with one of the proximal section and the distal section."

The Examiner acknowledges that Macchia does not show or suggest a cannulated screw and cites Landry to cure this deficiency. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to modify Macchia to include a cannulation therethrough such that a guide wire could be used to during surgery. It is respectfully submitted, however, that Macchia discloses a detachable connection between two screws employed in electrical circuits which are not used in conjunction with guide wires. Thus, it is respectfully submitted that nothing in the cited references suggests the modification proposed by the Examiner and that this proposed modification is improperly based solely on the disclosure in the present application.

Specifically, Macchia describes a screw connector assembly 20 including a machine screw 22 and a wood screw 24 connected via a ball tip 40 and a socket 30. *Macchia*, col. 2, ll. 6 - 22. Macchia specifically teaches that the screws 22, 24 are assembled with panels of electrical circuits so that the panels may be independently tilted with respect to each other while

maintaining an electrical ground in one panel in all positions of tilt of the other panel. *Id.* at col. 2, ll. 32 - 39. The connector assembly 20 of Macchia is configured to be used for electrical connections such as instrument panels or automobiles, a radio, heater, clock, televisions, telephones, etc. *Id.* at col. 3, ll. 32 - 46. Thus, it is respectfully submitted that the connector assembly 20 of Macchia is not appropriate for surgical use and would never have been used in conjunction with a guide wire. Thus, there is no teaching in the cited prior art that would have suggested the claimed bone screw including a cannulated shaft.

Furthermore, it is submitted that while Macchia discloses a connection for electrical circuits, Landry teaches a spinal stabilization system. It is respectfully submitted that there is absolutely no teaching suggestion or motivation for modifying the electrical connection assembly of Macchia to include a cannulation extending through the spinal stabilization bone fastener of Landry as this cannulation would serve no purpose in either application. It is respectfully submitted therefore that Takachi also does not cure the above-described deficiency of Macchia.

Accordingly, it is respectfully submitted that Macchia in view of Landry and Takachi does not show or suggest “*a cannulated shaft*,” as recited in claim 11. Thus, it is respectfully submitted that claim 11 is not rendered obvious by Macchia in view of Landry and Takachi and that the rejection of this claim should be withdrawn. Because claims 12, 14, 16-19, and 21 depend from and include all of the limitations of claim 11, it is respectfully submitted that these claims are also allowable.

Claim 30 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Macchia in view of Landry.

Claim 30 recites a bone screw, comprising “a head, *a cannulated shaft* extending distally from the head and having a longitudinal axis, a proximal section adjoining the head, wherein the proximal section is at least partially threaded, and a distal section polyaxially associated with and in contact with the proximal section, the distal section being separated from the head by the proximal section.”

For at least the same reasons as discussed above in regard to claim 11, it is respectfully submitted that claim 30 is also allowable and that the rejection of this claim should be withdrawn.

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Macchia in view of Landry, Takachi, and U.S. Publ. Appln. No. 2004/0236330 to Purcell et al. ("Purcell").

It is respectfully submitted that Purcell does not cure the deficiency of Macchia in view of Landry and Takachi, as discussed above in regard to claim 11. Since claim 20 depends from and, therefore, includes all of the limitations of claim 11, it is respectfully submitted that this claim is also allowable.

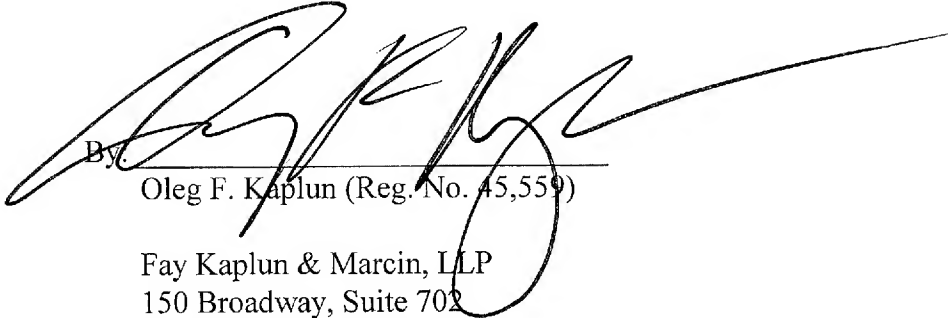
In view of the remarks submitted above, the Applicants respectfully submit that the present case is in condition for allowance. All issues raised by the Examiner have been addressed, and a favorable action on the merits is thus earnestly requested.

Respectfully submitted,

Dated:

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